

CLAIMS

WHAT IS CLAIMED IS:

1. An apparatus for making a spiral wound gasket, comprising:

a feeder that communicates a length of an elongate band for winding in overlapping relation to make a spiral wound gasket therefrom;

a rotatable die defining a slot extending inwardly from a perimeter of the die sized for receiving a distal end portion of the elongate band, for winding the length of the elongate band around the perimeter of the die;

a fixing device for securing selected portions of the wound elongate band together;

a cutter for severing the elongate band, whereby the spiral wound gasket made with the length of the elongate band is separable from the apparatus; and

a tapper movable from a first position in alignment with a perimeter portion of the die to a second position striking forcibly against the perimeter portion of the die to dislodge the spiral wound gasket therefrom,

whereby the elongate band, being engaged to the die by the distal end portion of the elongate band being received

in the slot, is wound around the perimeter of the die until a desired radially thick spiral wound gasket is formed and upon being secured together by the fixing device, the cutter operating to sever the elongate band and the taper striking the perimeter portion of the die to dislodge the spiral wound gasket therefrom.

2. The apparatus as recited in claim 1, further comprising a mandrel for holding a spool of the elongate band for being communicated by the feeder.

3. The apparatus as recited in claim 1, wherein the feeder is movable between a first position spaced-apart from the die and a second position adjacent the die for feeding the distal end portion of the elongate band into the slot.

4. The apparatus as recited in claim 1, wherein the taper is movable between a third position spaced-apart from the die and the first position aligned with the perimeter portion of the die prior to striking the die to dislodge the spiral wound gasket.

5. The apparatus as recited in claim 1, further comprising a tracking device for measuring the radial thickness of the spiral wound gasket to determine when the desired size gasket has been wound with the elongate band.

6. The apparatus as recited in claim 5, wherein the tracking device comprises:

a roller that bears against an exterior face of the elongate band being wound on the die to form the spiral wound gasket; and

a measuring device for reporting the change in position of the roller as the die winds the elongate band around the perimeter thereof.

7. The apparatus as recited in claim 1, wherein the fixing device comprises a welder having a operating tip for causing the elongate band to become secured together.

8. The apparatus as recited in claim 7, wherein the welder is an electric welder and the operating tip has an anode tip and an electrode tip for touching a selected portion of the elongate member to be secured.

9. The apparatus as recited in claim 1, wherein the fixing device is movable between a first position spaced-apart from the spiral wound gasket being wound on the die and a second position adjacent the spiral wound gasket for securing portions thereof.

10. The apparatus as recited in claim 1, further comprising a pair of rollers spaced-apart and defining a gap for receiving the elongate band therein, the faces of the rollers defining a protuberance and a conforming recess, wherein the protrudance bearing against the elongate band defines a crimp in the elongate band.

11. A method for making a spiral wound gasket, comprising the steps of:

(a) receiving a distal end portion of an elongate band in a slot extending inwardly from a perimeter edge of a die;

(b) winding a length of the elongate band around the perimeter of the die; and

(c) fixing selected portions of the wound elongate band together to form a spiral wound gasket.

12. The method as recited in claim 11, further comprising the step of actuating a cutter to sever the elongate band and thereby separate the spiral wound gasket for removal from the die.

13. The method as recited claim 11, further comprising the step of removing the spiral wound gasket from the die.

14. The method as recited in 12 wherein the step of removing comprises striking a tapper forcibly against a perimeter portion of the die to dislodge the spiral wound gasket therefrom.

15. A spiral wound gasket comprising an elongate band jacketed by a sealing material, the elongate band wrapped in a plurality of overlapping turns to define a radially thick gasket having an inner diameter for being exposed to a material to be sealed and an outer diameter, the jacket of the sealing material defining interior portions of the gasket having the sealing material with a high density between adjacent overlapping turns of the elongate band and defining opposing flange sealing faces of the sealing

material with a low density, for use in sealing applications.

16. A spiral wound gasket comprising an elongate band jacketed by a build up of discrete expanded intercalated graphite worms attached to the elongate band, the elongate band wrapped in a plurality of overlapping turns to define a radially thick gasket having an inner diameter for being exposed to a material to be sealed and an outer diameter, the jacket of the expanded intercalated graphite worms defining interior portions of a gasket having a high density between adjacent overlapping turns of the elongate band and defining opposing flange sealing faces of expanded intercalated graphite worms packed to a low density, for use in sealing applications.

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